DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

H1PC
Revision 6
Kawasaki
KV107-II
KV107-IIA
March 15, 1979

TYPE CERTIFICATE DATA SHEET NO. H1PC

This data sheet which is a part of type certificate No. H1PC prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Holder of Type Certificate: Kawasaki Heavy Industries, Limited
2-Chome, Higashi-Kawasaki-cho, Ikuta-ku
Kobe-city, Japan

I - Model KV107-II (Transport Helicopter - Categories A and B), Approved November 5, 1965

Engines: 2 General Electric CT58-110-1 or 2 Ishikawajima-Harima Heavy Industries, Ltd. CT58-IHI-110-1 (with Hamilton Standard Fuel Control JFC-26)

Fuel: Aviation Kerosene JP4 or JP5 (General Electric Co. Jet Fuel Spec. No. D50TF2 or subsequent revisions thereto.)

Engine limits: Sea level static

	Shaft Power HP	Turbine R.P.M.	Gas Gen. R.P.M.	Power Turbine Inlet Temp.(T5)
Takeoff (5 min.)	1250	21275(109.1% Nf)	26300(100.3% Ng)	1250°F(677°C)
One engine inoperative (30 min.) See NOTE 5	1250	21275(109.1% Nf)	26300(100.3% Ng)	1250°F(677°C)
One engine inoperative (2 1/2 min.) See NOTE 6	1350	21275(109.1% Nf)	26800(102.2% Ng)	1300°F(704°C)
Maximum continuous	1050	21275(109.1% Nf)	26300(100.3% Ng)	1175°F(635°C)
Maximum transient (2 sec.)				1545°F(840°C)
Starting (4 sec.)				1545°F(840°C)
Allowable maximum overspeed (15 sec.)		23100(118.4% Nf)	27600(105.3% Ng)	

Takeoff and maximum continuous horsepower ratings are normally obtained at a power turbine speed of 19,500 r.p.m. (100% Nf).

Total power for twin-engine operation is limited to 2440 hp. for takeoff and 2230 hp. for maximum continuous.

Rotor Limits: Power on: Maximum 275 r.p.m. Minimum 233 r.p.m. Power off: Maximum 299 r.p.m. Minimum 233 r.p.m.

Airspeed limits: Never exceed 168 m.p.h. (146 knots) CAS
170 m.p.h. (148 knots) IAS zero instrument error

Variation of Vne with rotor r.p.m. and altitude is in the Rotorcraft Flight Manual.

I - Model KV107-II (Transport Helicopter - Categories A and B), Approved November 5, 1965 (Cont'd)

C.G. range	Category A:	(+267.5) to (+307.5) at 17900 lb. (+267.5) to (317.0) at 16500 lb. or less
	Category B:	(+271.0) to (+300.0) at 19000 lb. (+267.5) to (+306.1) at 18100 lb. (+267.5) to (+317.0) at 16500 lb. or less
	Straight line variation between points given.	
Empty weight C.G. range	None	
Maximum weight	Category A: 17900 lb. Category B: 19000 lb.	
Minimum crew	2 (Pilot, Copilot)	
Maximum passengers	39, limited by emergency exit requirements	
Maximum baggage	Baggage bin 1500 lb. (+440). See NOTE 3 for cargo.	
Fuel capacity	350 gal. (+348.4)	
Oil capacity	4.2 gal. (+431.3) See NOTE 1 for data on system fuel and oil	
Rotor blade and control movements	For rigging information, refer to Maintenance Manual	
Serial Nos. eligible	The Government of Japan Certificate of Airworthiness for Export endorsed as noted under "Import Requirements" must be submitted for each individual aircraft for which application for certification is made. Serial Nos. 4001, 4003, 4005, 4011, 4012 and 4014 are eligible for airworthiness certification.	

II - Model KV107-IIA (Transport Helicopter - Categories A and B) Approved January 15, 1969

Engines	2 General Electric CT58-140-1 (with Hamilton Standard Fuel Control JFC-26)			
Fuel	Aviation Kerosene, JP4 or JP5 (General Electric Co. Jet Fuel Spec. No. D50TF2 or subsequent revisions thereto.)			
Engine limits	Sea level static			

	Shaft HP	Power Turbine R.P.M.	Gas Gen. R.P.M.	Power Turbine Inlet Temp. (T5)
Takeoff (5 min.)	1400	21275(109.1% Nf)	26300(100.3% Ng)	1285°F(696°C)
One engine inoperative (30 min.) See NOTE 5	1400	21275(109.1% Nf)	26300(100.3% Ng)	1285°F(696°C)
One engine inoperative (2 1/2 min.) See NOTE 6	1500	21275(109.1% Nf)	26800(102.2% Ng)	1330°F(721°C)
Maximum continuous	1250	21275(109.1% Nf)	26300(100.3% Ng)	1220°F(660°C)
Maximum transient (2 sec.)				1545°F(840°C)
Starting (2 sec.)				1740°F(949°C)
Allowable maximum overspeed (15 sec.)		23100(118.4% Nf)	27600(105.3% Ng)	

Takeoff and maximum continuous horsepower ratings are normally obtained at a power turbine speed of 19,500 r.p.m. (100% Nf).

Total power for twin-engine operation is limited to 2440 hp. for takeoff and 2230 hp. for maximum continuous.

II - Model KV107-IIA (Transport Helicopter - Categories A and B) Approved January 15, 1969 (Cont'd)

Rotor limits	Power on:	Maximum 275 r.p.m. Minimum 233 r.p.m.	Power off:	Maximum 299 r.p.m. Minimum 233 r.p.m.	

Airspeed limits

Never exceed 168 m.p.h. (146 knots) CAS
170 m.p.h. (148 knots) IAS zero instrument error
Variation of Vne with rotor r.p.m. and altitude is in the Rotorcraft Flight Manual.

C.G. range

Category A: (+267.5) to (+307.5) at 17900 lb.
(+267.5) to (+317.0) at 16500 lb. or less

Category B: (+271.0) to (+300.0) at 19000 lb.
(+267.5) to (+306.1) at 18100 lb.
(+267.5) to (+317.0) at 16500 lb. or less
Straight line variation between points given

Empty weight
C. G. range

None

Maximum weight

Category A: 17900 lb.

Category B: 19000 lb.

Minimum crew

2 (Pilot, Copilot)

Maximum passengers

39, limited by emergency exit requirements

Maximum baggage

Baggage bin 1500 lb. (+440). See NOTE 3 for cargo

Fuel capacity

350 gal. (+348.4)

Oil capacity

4.2 gal. (+431.3) See NOTE 1 for data on system fuel and oil

Rotor blade and control movements

For rigging information, refer to Maintenance Manual

Serial Nos. eligible

The Government of Japan Certificate of Airworthiness for Export endorsed as noted under "Import Requirements" must be submitted for each individual aircraft for which application for certification is made. Aircraft with serial no. 4013 eligible for airworthiness certification.

Data Pertinent to All Models

Datum

103.6 inches forward of forward jacking point

Leveling means

Plumb line from top of main door frame

Certification basis

CAR 10 dated March 28, 1955. (Applicable regulations are CAR 7 dated August 1, 1956, including Amendments 7-1 through 7-5, and Special Conditions for Turbine Powered Rotorcraft in Attachment "A" to FAA letter to the JCAB dated April 15, 1965, and in Attachment "A" to FAA letter to the JCAB dated September 15, 1965.) Exemptions No. 188 dated November 27, 1961, No. 188A dated April 4, 1962 and No. 374 dated December 21, 1964.

Type Certificate H1PC issued November 15, 1965.

Date of application for Type Certificate, November 28, 1964.

Data Pertinent to All Models (Cont'd)

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification basis) must be installed in the helicopter for certification. In addition, the following items of equipment are required:

(a) JCAB approved Rotorcraft Flight Manual for KV107-11.
JCAB approved Rotorcraft Flight Manual for KV107-11A.

(b) SAS Installation, 107E2317 and WE2225.

Import Requirements

A. U.S. Certificate of Airworthiness may be issued on the basis of a Japanese Certificate of Airworthiness for Export signed by a representative of the Japan Civil Aviation Bureau containing the following notation: "The rotorcraft covered by this certificate has been found to conform to Type Certificate Number H1PC and is in a condition for safe operation."

NOTE 1. (a) Current weight and balance report including list of required equipment and equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each helicopter at the time of original certification. The certificated empty weight and corresponding C.G. locations must include undrainable oil of 10 lb. (405) and unusable fuel of 9 lb. (362).

(b) The unusable fuel for vertical operation is 286 lb. (362).

NOTE 2. The following placard must be displayed in front of and in clear view of the pilot.

"THIS HELICOPTER MUST BE OPERATED IN ACCORDANCE WITH THE JAPAN CIVIL AVIATION BUREAU APPROVED ROTORCRAFT FLIGHT MANUAL."

NOTE 3. The cabin floor area between fuselage stations 120 and 410 is structurally satisfactory for a uniformly distributed loading of 150 p.s.f. when used for cargo purposes. Bulkhead No. 107S4314 is movable and can be installed at fuselage stations 284.3, 347.9 and 407.3. When this bulkhead is installed at fuselage station 347.9 or 284.3, the maximum total load permitted aft of it, including the contents of the baggage bin (1500 lb. maximum) is 5000 lb. The cabin floor loading of 150 p.s.f. should not be exceeded under any conditions.

NOTE 4. Information essential to the proper maintenance of the helicopter is contained in the manufacturer's Maintenance Schedule provided with each helicopter which specifies that the service life limited parts be retired in accordance with the schedule contained in the JCAB approved Section 1 of this document dated May 27, 1976, or any subsequent JCAB approved revision thereto.

NOTE 5. If takeoff power is used in cumulative excess of five minutes during any one emergency, the engine must be inspected in accordance with General Electric Commercial Engine Service Memorandum CT58-110-1, Maintenance No. 19, April 17, 1962 or subsequent revisions thereto.

NOTE 6. Engine controls must be set for this rating for vertical operations (see engine limits).

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